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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,690	09/09/2003	Hiroyuki Yoshimura	FUJI:278	2165

7590

02/24/2005

ROSSI & ASSOCIATES
P.O. Box 826
Ashburn, VA 20146-0826

EXAMINER

GIESY, ADAM

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,690

Applicant(s)

YOSHIMURA ET AL.

Examiner

Adam R. Giesy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because figures 8A-10E are not properly labeled as "PRIOR ART". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 9-10, 13-14, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsuda et al. (Matsuda – US Pat. No. 6,721,113 B2).

Regarding claim 1, Matsuda discloses a method of magnetically transferring a magnetic pattern (column 1, lines 48-55) from a master disc having soft magnetic material embedded therein (column 2, line 15) to a magnetic recording medium (Figure 7B, element 3), comprising the steps of: determining an origin of a magnetic recording medium by observing an inner or outer periphery of the magnetic recording medium (column 2, lines 36-50); providing an alignment mark on a first side of the magnetic recording medium based on the origin thus determined (the magnetic recording medium 3 is described as “...doughnut-shaped with an open hole,” and the hole is used to align the disk with the position mark on the master disk, therefore the hole is a position mark – see column 3, lines 1-12); providing an alignment mark on a second side opposite the first side of the magnetic recording medium based on the alignment mark on the first face (the magnetic recording medium 3 is described as “...doughnut-shaped with an open hole,” and the hole is used to align the disk with the position mark on the master disk, therefore the hole is a position mark and extends to both sides– see column 3, lines 1-12); and aligning a corresponding alignment mark on the master disc coincident with the alignment mark provided on the first or second side of the magnetic recording medium to transfer a magnetic pattern formed on the soft magnetic material to the magnetic recording medium (column 3, lines 40-53).

Regarding claim 4, Matsuda discloses all of the limitations of claim 1 as stated in the claim 1 rejection above and further that the step of providing the alignment mark on the second

side comprises the steps of: disposing a photomask at a predetermined position to provide the alignment mark on the second side and recording an image of the photomask (column 3, lines 17-25); disposing the magnetic recording medium at a predetermined position and observing an image the alignment mark provided on the first side (see Figure 4); comparing the recorded image with the observed image (column 2, lines 51-64); and correcting the position of the magnetic recording medium based on the comparison (column 3, lines 1-12).

Regarding claim 9, Matsuda discloses all of the limitations of claim 1 as stated in the claim 1 rejection above and further that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side of the master disc where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is located opposite to the side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 10, Matsuda discloses all of the limitations of claims 1 and 4 as stated in the claim 1 and 4 rejections above and further that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side of the master disc where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is located opposite to the side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 13, Matsuda discloses all of the limitations of claim 1 as stated in the claim 1 rejection above and further that the alignment mark (Figure 1, element 9) of the master

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disc (Figure 1, element 7) is provided on a side opposite to the side where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is a side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 14, Matsuda discloses all of the limitations of claims 1 and 4 as stated in the claim 1 and 4 rejections above and further that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side opposite to the side where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is a side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 16, Matsuda discloses a magnetic transferring device (column 1, lines 48-55) comprising: a master disc having soft magnetic material embedded on a first side thereof (column 2, line 15) and an alignment mark on one of the first side and a second side opposite the first side (see Figure 1, element 9); and a magnetic recording medium having at least one alignment mark on each of a first side and a second side thereof (the magnetic recording medium 3 is described as "...doughnut-shaped with an open hole," and the hole is used to align the disk with the position mark on the master disk, therefore the hole is a position mark and extends to both sides— see column 3, lines 1-12), wherein the alignment mark on the master disc is alignable with the alignment mark provided on the first or second side of the magnetic recording medium

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to transfer a magnetic pattern formed on the soft magnetic material to the magnetic recording medium (column 3, lines 40-53).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-3, 5-8, 11-12, 15, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al. (Matsuda – US Pat. No. 6,721,113 B2) in view of Hamano et al. (Hamano – US Doc. No 2002/0081018 A1).

Regarding claim 2, Matsuda discloses all of the limitations of claim 1 as stated in the claim 1 rejection above. Matsuda does not disclose that the alignment mark on the first or second side is placed outside a data area where magnetic information on the magnetic recording medium is written/read.

Hamano discloses a series of position marks (Figure 1, element 16) that are placed outside the data area where magnetic information on the magnetic recording medium is written/read (see Figure 1). The combination of the transfer method disclosed by Matsuda and the position marks as disclosed by Hamano would yield a method of transfer in which position marks are placed outside of the data area.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda with the disclosure of Hamano, the motivation being in order to produce a magnetic transfer method in which a recordable medium would be

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aligned with a master medium by use of position marks that do not affect the data being transferred.

Regarding claim 3, Matsuda discloses all of the limitations of claim 1 as stated in the claim 1 rejection above. Matsuda does not disclose that the alignment marks on the first and second sides are formed by a photo process.

Hamano discloses that the alignment marks (read on by position marks – Figure 1, element 16) undergo laser processing (reads on ‘photo process’ – see paragraph 29). The combination of the transfer method disclosed by Matsuda and the photo position marks as disclosed by Hamano would yield a method of transfer in which position marks are created using light.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda with the disclosure of Hamano, the motivation being in order to produce a magnetic transfer method in which a recordable medium would be aligned with a master medium by use of position marks which were applied accurately without destroying data from the disk.

Regarding claim 5, Matsuda discloses all of the limitations of claim 1 as stated in the claim 1 rejection above. Matsuda does not disclose that two or more alignment marks are provided on the master disc, and two or more alignment marks corresponding to the master disc are formed on the first or second side of the recording medium.

Hamano discloses that the alignment marks (read on by position marks – Figure 1, element 16) are provided “simultaneously” (reads on ‘two or more’ – see paragraph 29). The combination of the transfer method disclosed by Matsuda and the photo position marks as

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disclosed by Hamano would yield a method of transfer in which position marks are created two or more at a time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda with the disclosure of Hamano, the motivation being in order to produce a magnetic transfer method in which a recordable medium would be aligned with a master medium by use of position marks which were applied accurately and at the same time.

Regarding claim 6, Matsuda discloses all of the limitations of claim 4 as stated in the claim 4 rejection above, respectively. Matsuda does not disclose that two or more alignment marks are provided on the master disc, and two or more alignment marks corresponding to the master disc are formed on the first or second side of the recording medium.

Hamano discloses that the alignment marks (read on by position marks – Figure 1, element 16) are provided “simultaneously” (reads on ‘two or more’ – see paragraph 29). The combination of the transfer method disclosed by Matsuda and the photo position marks as disclosed by Hamano would yield a method of transfer in which position marks are created two or more at a time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda with the disclosure of Hamano, the motivation being in order to produce a magnetic transfer method in which a recordable medium would be aligned with a master medium by use of position marks which were applied accurately and at the same time.

Regarding claim 7, the combination of Matsuda and Hamano disclose all of the limitations of claim 5 as recited in the claim 5 rejection above. Matsuda discloses that the disks are closely touching (reads on 'engageable' - column 2, lines 54-64), but does not disclose the multiple position marks.

Hamano does disclose the multiple position marks. The combination of touching the disks together as well as the multiple position marks, would yield to an aligned master disk in which the position marks are configured to be engageable.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda and Hamano, the motivation being in order to create a more accurate positioning method for a magnetic transfer method.

Regarding claim 8, the combination of Matsuda and Hamano disclose all of the limitations of claim 6 as recited in the claim 6 rejection above. Matsuda discloses that the disks are closely touching (reads on 'engageable' - column 2, lines 54-64), but does not disclose the multiple position marks.

Hamano does disclose the multiple position marks. The combination of touching the disks together as well as the multiple position marks, would yield to an aligned master disk in which the position marks are configured to be engageable.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda and Hamano, the motivation being in order to create a more accurate positioning method for a magnetic transfer method.

Regarding claim 11, the combination of Matsuda and Hamano disclose all of the limitations of claim 5 as stated in the claim 5 rejection above. Matsuda further discloses that the

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alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side of the master disc where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is located opposite to the side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 12, the combination of Matsuda and Hamano disclose all of the limitations of claim 7 as stated in the claim 7 rejection above. Matsuda further discloses that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side of the master disc where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is located opposite to the side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 15, the combination of Matsuda and Hamano disclose all of the limitations of claim 5 as stated in the claim 5 rejection above. Matsuda further discloses that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side opposite to the side where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is a side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 17, Matsuda discloses all of the limitations of claim 16 as stated in the claim 16 rejection above. Matsuda does not disclose that two or more alignment marks are

provided on the master disc, and two or more alignment marks corresponding to the master disc are formed on the first or second side of the recording medium.

Hamano discloses that the alignment marks (read on by position marks – Figure 1, element 16) are provided “simultaneously” (reads on ‘two or more’ – see paragraph 29). The combination of the transfer method disclosed by Matsuda and the photo position marks as disclosed by Hamano would yield a method of transfer in which position marks are created two or more at a time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda with the disclosure of Hamano, the motivation being in order to produce a magnetic transfer method in which a recordable medium could be aligned with a master medium by use of position marks which were applied accurately and at the same time.

Regarding claim 18, the combination of Matsuda and Hamano disclose all of the limitations of claim 17 as recited in the claim 17 rejection above. Matsuda discloses that the disks are closely touching (reads on ‘engageable’ - column 2, lines 54-64), but does not disclose the multiple position marks.

Hamano does disclose the multiple position marks. The combination of touching the disks together as well as the multiple position marks, would yield to an aligned master disk in which the position marks are configured to be engageable.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the disclosure of Matsuda and Hamano, the motivation being in order to create a more accurate positioning method for a magnetic transfer method.

Regarding claim 19, the combination of Matsuda and Hamano disclose all of the limitations of claim 17 as stated in the claim 17 rejection above. Matsuda further discloses that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided on a side of the master disc where the soft magnetic material is embedded (column 3, lines 40-53), and the alignment mark provided side of the magnetic recording medium corresponding to the master disc is located opposite to the side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Regarding claim 20, the combination of Matsuda and Hamano disclose all of the limitations of claim 17 as stated in the claim 17 rejection above Matsuda further discloses that the alignment mark (Figure 1, element 9) of the master disc (Figure 1, element 7) is provided at the second side thereof (column 3, lines 40-53), and the alignment mark of the magnetic recording medium corresponding to the alignment mark of the master disc is the side to which the magnetic pattern is transferred by the master disc (see Figure 4 - element 9 is aligned with hole in element 3).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Takano (US Pat. No. 6,813,105 B2) discloses a method of magnetic transfer in which the master and recordable disks are held in close contact.
- b. Higashi (Us Doc. No. 2004/0224458 A1) discloses a method of using alignment marks on the recordable medium which transferring data.

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c. Curtiss et al. (US Pat. No. 6,757,116 B1) discloses the use of indicator marks that are used as alignment in order to transfer data.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam R. Giesy whose telephone number is (703) 306-4080. The examiner can normally be reached on 8:00am- 4:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on (730) 308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARG 2/4/05



DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600